

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (*Currently Amended*) A signal detection system comprising an electromagnetic signal detector having a limited on-time for detecting receipt of electromagnetic signals, at least two optical paths each arranged to receive an electromagnetic signal from the same nominal direction in space and to transmit any received signal towards ~~the~~the said signal detector, an optical time delay operative within one of ~~the~~the said optical paths to delay transmission of ~~any~~the said received signal towards ~~the~~the said signal detector, and ~~the~~the said optical time delay is selected to extend the operational range of ~~the~~the said signal detector by compressing the real time during which a said received signal can be received into the shorter on-time of ~~the~~the said signal detector.

2. (*Currently Amended*) A signal detection system, according to Claim 1, in which at least one of ~~the~~the said optical paths is arranged to transmit ~~any~~the said received signal in real time to ~~the~~the said signal detector within its on-time, and ~~the~~the said optical time delay is selected to transmit any signal received before real time to ~~the~~the said signal detector but within the same on-time.

3. (*Currently Amended*) A signal detection system, according to Claim 2, in which a further optical path is arranged to receive ~~an electromagnetic~~a said received signal from ~~the~~the said same nominal direction in space and to transmit ~~the~~the said received signal towards ~~the~~the said signal detector, a longer optical time delay is operative within ~~the~~the said further optical path, and ~~the~~the said

longer optical time delay is selected to transmit any signal received in a longer period before real time to ~~the~~the said signal detector but within the same on-time.

4. (*Currently Amended*) A signal detection system, according to ~~any preceding claim~~Claim 1, in which each of said optical path~~paths~~ is defined by a separate optical fibre and ~~the said~~ optical fibres are closely packed on a focal plane to collect electromagnetic signals from approximately ~~the said~~ same nominal direction in space.

5. (*Currently Amended*) A signal detection system, according to ~~any of Claims 1 to 4~~Claim 1, in which a single optical fibre is positioned to collect electromagnetic signals from ~~the said~~ same nominal direction in space, and a signal splitter is arranged to split any collected signal between ~~the said~~ optical paths.

6. (*Currently Amended*) A signal detection system, according to ~~any preceding claim~~Claim 1, in which a lens system is arranged to focus ~~any electromagnetic~~the said received signal transmitted by ~~the said~~ optical paths onto ~~the said~~ signal detector.

7. (*Currently Amended*) A signal detection system, according to ~~any of Claims 1 to 5~~Claim 1, in which a signal combiner is arranged to combine ~~electromagnetic~~the said received signals transmitted by ~~the said~~ optical paths and to transmit the combined signal to ~~the said~~ signal detector.

8. (*Currently Amended*) A signal detection system, according to ~~any preceding~~
~~claim~~Claim 1, including tagging means arranged to identify which of ~~the~~the said optical paths has
transmitted an associated portion of ~~the~~the said received signal.

9. (*Currently Amended*) A signal detection system, according to Claim 8, in which
~~the~~the said tagging means comprises a tagger arranged in each of ~~the~~the said optical paths and arranged
to identify a signal transmitted by that optical path.

10. (*Currently Amended*) A signal detection system, according to ~~any of Claims 1 to~~
~~9~~Claim 1, in which each of ~~the~~the said optical paths includes a processing element to process a
signal transmitted by that path.

11. (*Currently Amended*) A signal detection system, according to ~~any preceding~~
~~claim~~Claim 1, in the form of an active system, in which ~~the~~the said optical time delay ~~means are~~is
selected to define a series of ranges over which ~~the~~the said received signal might have travelled to
~~the~~the said signal detection system, and ~~the~~the said signal detector is arranged to identify the range of a
source of ~~the~~the said signal by identifying the optical path through which ~~the~~the said signal was
transmitted.

12. (*Currently Amended*) A signal detection system, according to ~~any of Claims 1 to~~
~~11~~Claim 1, in the form of a passive system in which ~~the~~the said optical time delay ~~means are~~is
selected to enable ~~the~~the said signal detector during a single on-time to average the value of ~~the~~
~~electromagnetic~~the said received signal.

13. (*Currently Amended*) A signal detection system, according to ~~any of Claims 1 to 10~~Claim 1, in the form of an active system including an electromagnetic energy transmitter, in which ~~the~~said received ~~electromagnetic~~ signal comprises a reflection of part of the electromagnetic energy by an object, and ~~the~~said optical time delay ~~means are~~is selected to define a series of ranges over which ~~the~~said reflection might have travelled to ~~the~~said signal detection system, and ~~the~~said signal detector is arranged to identify the range of ~~the~~said object by identifying the optical path through which ~~the reflected~~said reflection signal was transmitted.

14. (*Currently Amended*) A signal detection system, according to Claim 13, which is mounted for scanning in small increments to receive said reflected signal from different directions, ~~the~~said transmitter is arranged to emit multiple bursts of electromagnetic energy to illuminate a volume in space, and ~~the~~said signal detector is arranged to have a series of on-times co-ordinated with the bursts to detect any ~~reflected signal~~said reflection from ~~the~~said object.

15. (*Currently Amended*) A signal detection system, according to Claim 13 ~~or 14~~, comprising a plurality of signal detection systems arranged as a matrix of optical fibres, each of said optical fibres pointing in a different nominal direction, to receive ~~reflected signals~~reflections from ~~the~~said object and ~~the~~said signal detectors are arranged to form an image of ~~the~~said object.

16. (*Currently Amended*) A signal detection system, according to Claim 13 ~~or 14~~, comprising a plurality of signal detection systems arranged as a matrix of optical fibres, each of said optical fibres pointing in a different nominal direction, to receive ~~reflected~~

~~signals~~reflections, an optical system arranged to focus any ~~reflected electromagnetic~~
~~signal~~reflection from the object into the optical paths of ~~the~~the~~said~~ signal detectors, and ~~the~~the~~said~~
signal detectors are arranged to form an image of ~~a~~an~~said~~ object.

17. (*Currently Amended*) A method of detecting an electromagnetic signal travelling from
a nominal direction in space, comprising splitting the signal into a plurality of paths, delaying the
passage of the split signal along some of ~~the~~the~~said~~ paths, and detecting the portion of the signal
that leaves each of ~~the~~the~~said~~ paths at substantially the same time.

18. (*Original*) A method, according to Claim 17, including identifying the path through
which the signal was received.

19. (*Currently Amended*) A method, according to Claim 17 ~~or 18~~, including averaging the
signal leaving the paths.